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EXAMINER

YAO, SAMCHUAN CUA

ART UNIT	PAPER NUMBER
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1733

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/648,269

Applicant(s)

JIMBO, MASATO

Examiner

Sam Chuan C. Yao

Art Unit

1733

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 10/7/05
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thiessen et al (US 5,232,638) in view of Japan 07-268767 or vice versa.

Note: claim 6 does not positively require adhering silicon dioxide particles to ejected fibers before the fibers are deposited a collection member. In other words, this claim reads on adhering silicon dioxide particles to ejected fibers before and after the fibers have been deposited onto a collection member.

Thiessen et al discloses substantially the process recited in claims 6 and 8 (abstract; col. 8 lines 31-50; figures 1-2). While Thiessen et al is open to adding virtually any types of functional particles as evidence from the following passage: "... *particles of various types*" (abstract), "... *various types of additive materials intermingled with the manufactured fibers ... comprising powdered particles, ...*", Thiessen et al does not teach incorporating silicon dioxide particles to the ejected rotary fibers. However, such would have been obvious in the art, because JP '767 teaches the desirability of forming a functional fibrous web by adhering functional particles such as silica gel (i.e. silicon dioxide) to a fibrous web (abstract; page 2).

Art Unit: 1733

Alternatively, as noted above, JP '767 teaches adhering functional particles such as silica gel (i.e. silicon dioxide) to a fibrous web to form a functional fibrous web such as a dehydrating web (page 2). JP '767 appears to be silent on how the fibrous web is formed. In any event, it would have been obvious in the art to form a fibrous web using a rotary fiber manufacturing process where rotary fibers are formed by spinning molten resin to exert centrifugal force to the resin so as to eject fibers from a spinner as such is a notoriously well known process in the art.

3. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the reference set forth in numbered paragraph 2, as applied to claim 8 above, and further in view of France 2,764,185.

It would have been obvious in the art to heat-activate fibrous material in a nonwoven web before functional particles are applied to the nonwoven web as such is well known in the art as exemplified in the teachings of France (abstract; figure 1) in order to effectively stick functional particles to heat-activated fibers.

4. Claims 6 and 8-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over France 2764185 A1 in view Rook et al (US 5,326,241) and ((EP 388,120) or (one of Weisman et al (US 4,610,678) and Di Luccio et al (US 2002/0087129)).

France '185 teaches heating a thermoplastic fibrous web and then spraying heated SAP to the heated fibrous web to adhere the SAP into the fibrous web. France '185 differs from claims 6 and 8-9 in that, France '185 does not appear to teach forming thermoplastic fibers by centrifugal spinning process. However, such would have

Art Unit: 1733

been obvious in the art as such is conventional in the art as exemplified in the teachings of Rook et al (abstract; figure 1).

While France '185 teaches adhering SAP into a fibrous web, France '185 does not teach adhering silicon dioxide into the web. However, it would have been obvious in the art to blend SAP and "*a porous powder of a high-purity silicon dioxide*" in a process of France '185, because EP '120 teaches blending SAP and "*a porous powder of a high-purity silicon dioxide*" in order to enhance the freshness of SAP during storage and transport. It directly follows that, since the SAP and silicon dioxide powder are blended together, the silicon dioxide powder must also be adhered to a fibrous web as SAP is being adhered to the fibrous web in a modified process of France. **Alternatively**, it would have been obvious in the art to use silica gel SAP in the process of France '185 as such is a well known SAP in the art of making an absorbent article as exemplified in the teachings of either Weisman et al (col. 3 line 62 to col. 3 line 52) or Di Luccio et al (numbered paragraph 34).

With respect to claims 11-12, see figures 5-6 of the France '185. While it is unclear whether or not a back-sheet is air-permeable, such would have been obvious in the art, because it is a notoriously common practice in the art to form an absorbent article comprising a microporous backsheet (i.e. liquid impermeable and yet breathable).

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references set forth in numbered paragraph 4 as applied to claim 6 above, and further in view of Loftus et al (US 5,595,584) and McFarland et al (US 4,604,313).

Art Unit: 1733

The limitation in this claim would have been obvious in the art, because: a) it is well known in the art to form a series of centrifugally ejected stream of thermoplastic fibers as exemplified in the teachings of Loftus et al (abstract; figure 1); and b) it is well known in the art to form a multi-layer absorbent article from a series of melt-blown fiber stream, where SAP and/or pulp are adhered to the melt-blown fiber stream as exemplified in the teachings of McFarland et al (figures 1-2).

6. Claims 6-8 and 10-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over McFarland et al (US 4,604,313) in view of Thiessen et al (US 5,232,638), Loftus et al (US 5,595,584) and either ((EP 388,120) or (one of Weisman et al (US 4,610,678) and Di Luccio et al (US 2002/0087129)).

With respect to claims 6-8, McFarland et al discloses a process of making an absorbent article. The process comprises forming a series of melt-blown stream of fibers and adhering a stream of absorbent particles such pulp and/or SAP to the melt-blown stream of fibers (figures 1-8). McFarland et al differs from these claims in that: a) McFarland et al does not disclose using a centrifugal spinning operation to form stream of molten fibers; and, b) McFarland et al does not teach adhering silicon dioxide particles to the stream of molten fibers.

As for limitation "a", absent any showing of unexpected benefit, it would have been obvious in the art to form stream of molten fibers using a centrifugal spinning process instead of a melt-blowing process, because: a) it is well known in the art to adhere particles to a stream of molten fibers using centrifugal spinning process; and,

Art Unit: 1733

b) it is also well known in the art to form a series of centrifugally ejected thermoplastic fibers as exemplified in the teachings of Loftues et al (figures 1-2). As for limitation "b", it would have been obvious in the art to blend SAP and "a porous powder of a high-purity silicon dioxide" in a process of McFarland et al, because EP '120 teaches blending SAP and "a porous powder of a high-purity silicon dioxide" in order to enhance the freshness of SAP during storage and transport. It directly follows that, since the SAP and silicon dioxide powder are blended together, the silicon dioxide powder must be adhered to a fibrous material as SAP is being adhered to the fibrous material in a modified process of McFarland et al. **Alternatively**, it would have been obvious in the art to use silica gel particles for an SAP in the process of France '185 as such is a well known SAP in the art of making an absorbent article as exemplified in the teachings of either Weisman et al (col. 3 line 62 to col. 3 line 52) or Di Luccio et al (numbered paragraph 34). With respect to claims 11-12, see column 6 line 45 to col. 7 line 27 and figure 5 of the McFarland et al patent.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references set forth in numbered paragraph 6, as applied to claim 8 above, and further in view of Groeger et al (US 5,674,339) and France 276185 A1.

The limitation in this claim would have been obvious in the art, because: a) it is old in the art to adhere functional particles such as silica to a plurality of heat-activated thermoplastic fibrous webs as exemplified in the teachings of Goeger et al (abstract;

Art Unit: 1733

col. 6 lines 8-41; figures 7-9); and, France '185 teaches adhering SAP to a heated fibrous web to form an absorbent article (abstract; figure 1).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sam Chuan C. Yao whose telephone number is (571) 272-1224. The examiner can normally be reached on Monday-Friday with second Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Dunn can be reached on (571) 272-1171. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Sam Chuan C. Yao
Primary Examiner
Art Unit 1733

Scy
10-24-05